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ABSTRACT

The purpose of the study was to engage college supervisors in analysis of the verbal interaction they employed in conferences with student teachers. Subjects in the study were 14 pairs of college supervisors-elementary student teachers in the Dept. of Elementary Education at a state college in New York during the spring semester of 1971. An experimental design was employed with the experimental group (n = 7 pairs): a) receiving training in analysis of verbal interaction, b) analyzing their own verbal interaction and, c) considering the results of the analysis of their verbal behavior. The control group (n = 7 pairs) did not received systematic training, did not engage in analysis of their verbal behavior, and did not have the opportunity to consider results of analysis. Data were secured by means of audio-taped conferences analyzed using the Blumberg Interaction Analysis System and a 47-item questionnaire constructed by the researchers and given to student teachers in the experimental and control groups after each of four sequential conferences. Results indicated the student teacher's perceptions were consistent in three areas: human relations, verbal process, and substance. Lower ratings were given to statements involving student output in problem solving, pursuing ways of collecting data pertinent to teacher behavior, being asked thought provoking questions, and being allowed time to think, discover and explore ideas. An extensive bibliography is included. (Author/MJM)

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ANALYSIS OF VERBAL INTERACTION IN SUPERVISORY CONFERENCES WITH STUDENT TEACHERS

by

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Spring Semester - 1971

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The purpose of the study was to engage college supervisors in analysis of the verbal interaction they employed in the student teacher-supervisor conference. Specifically, do student teacher supervisors who engage in the systematic analysis of their verbal behavior when conferring with their student teachers modify their verbal behavior in subsequent conferences to an extent and in ways different from supervisors who do not engage in systematic analysis of their verbal behavior during conferences?

An experimental design was employed with the experimental group: (1) receiving training in analysis of verbal interaction, (2) analyzing their own verbal interaction, and (3) considering the results of the analysis of their verbal behavior. The control group did not receive systematic training, did not engage in analysis of their verbal behavior, and of course, did not have the opportunity to consider results of analysis.

Subjects in the study were fourteen college supervisors and fourteen student teachers during the 1971 spring semester of student teaching. Both supervisors and student teachers were in the Department of Elementary Education at a State College in New York. Students were pursuing their student teaching experience for elementary teaching certification in grades K-6.

Data consisted of audio-taped conferences: fourteen pre-treatment tapes (seven from the experimental group and seven from the control group) and fourteen post-treatment tapes (seven from the experimental group and seven from the control group). The tapes were analyzed for verbal interaction using the Arthur Blumberg Interaction Analysis System. The System provides data in a total of fifteen categories: ten for supervisor behavior, four for student teacher behavior, and one for silence or confusion. The central hypothesis of the study was to be tested in relation to thirteen identified variables. These thirteen variables represented a modification of the Blumberg System by elimination of particular categories and a combining of others.

Findings

Those college supervisors who were trained in analysis of verbal interaction, analyzed their own verbal interaction, and considered the results of analysis, differed significantly from those college supervisors who were not trained, did not engage in the analysis of verbal behavior, and did not have the opportunity to consider results of analysis, in the following supervisor verbal behaviors:

1. They used more acceptance, clarification, or building on and developing the ideas suggested by student teachers.
2. They gave less information.
3. They used less extended talk on the information--giving and asking--level.

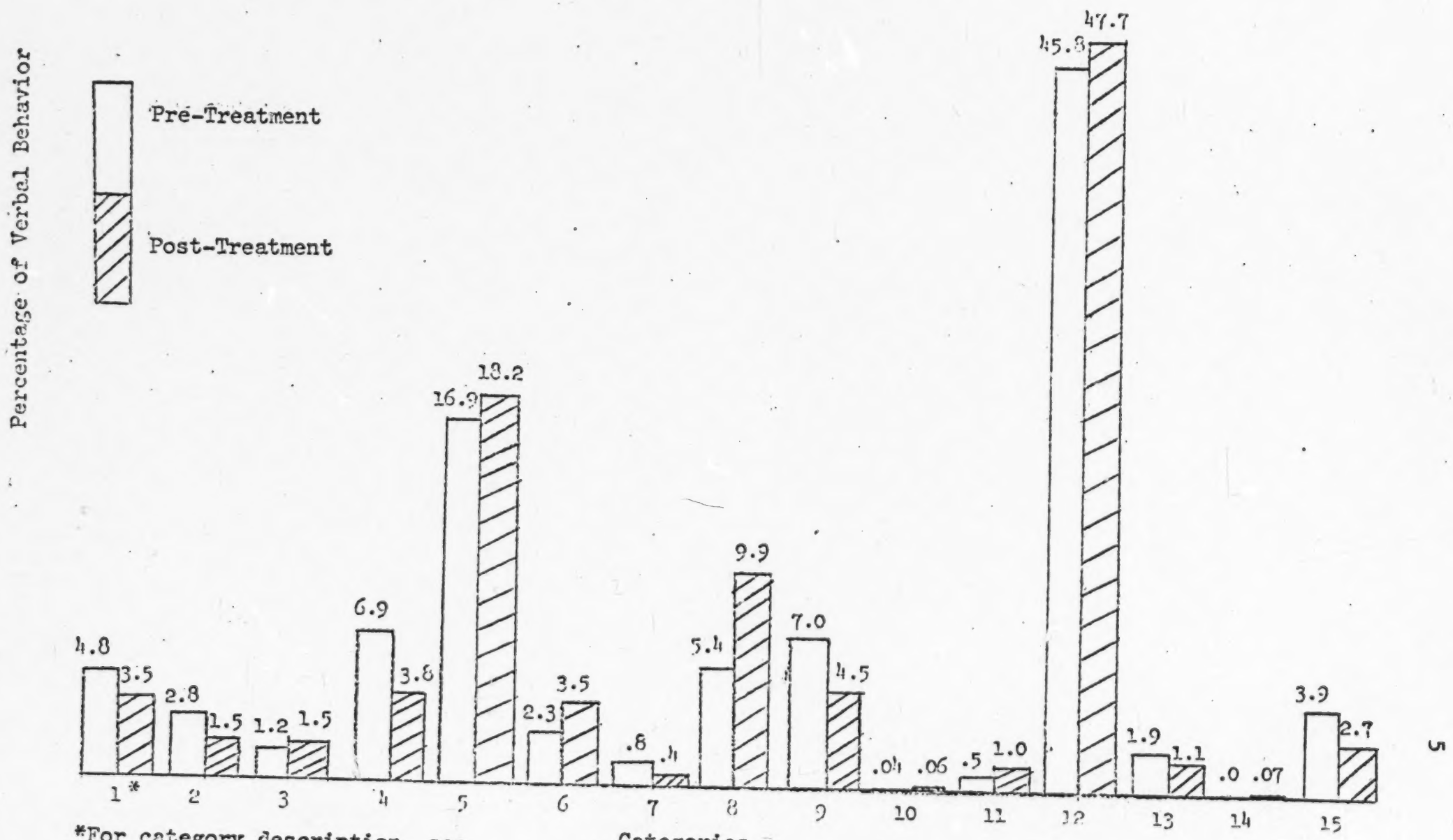
4. They became more indirect in supervisory style. Verbal behavior by the college supervisor with a concentration in the asking for opinions, information, suggestions, as well as accepting, praising, and using a student teacher's ideas during a supervisory conference.
5. They asked for more opinions that influenced the supervisee to describe, analyze, hypothesize, or evaluate something that had occurred, was occurring, or may occur in the classroom or in the interaction taking place. (Significant at the .10 level.)

Supplementary data was secured by means of a forty-seven item questionnaire constructed by the researcher and given to student teachers in the experimental and control groups after each of four sequential conferences. The purpose of the questionnaire was to gain insights into the student teachers' perceptions of the human relations qualities displayed by the college supervisors, the verbal processes employed, and the substance of the conferences (content and procedure). Specifically, if college supervisors in the experimental group modified their verbal behavior due to training in interaction analysis, were student teachers aware of this process and did it change their perception of the human relations employed by the college supervisor? Questionnaire data were used to give impetus to, reflect, or clarify findings pertinent to the major hypothesis and no attempt was made to correlate the findings.

The data obtained indicated the student teacher's perceptions were rather consistent in the three major divisions: human relations, verbal process, substance. Human relations qualities of the college supervisors, as perceived by student teachers, were highly positive and remained constant throughout the semester. There was a slight increase in the experimental verbal process scores, especially those questions pertaining to involvement in problem solving, but, in general, student teachers continued to give lower ratings to statements involving their output in problem solving, pursuing ways of collecting data pertinent to their teaching behavior, being asked thought provoking questions, and being allowed time to think, discover, and explore ideas. Findings in interaction analysis would confirm the perceptions of student teachers.

FIGURE 1

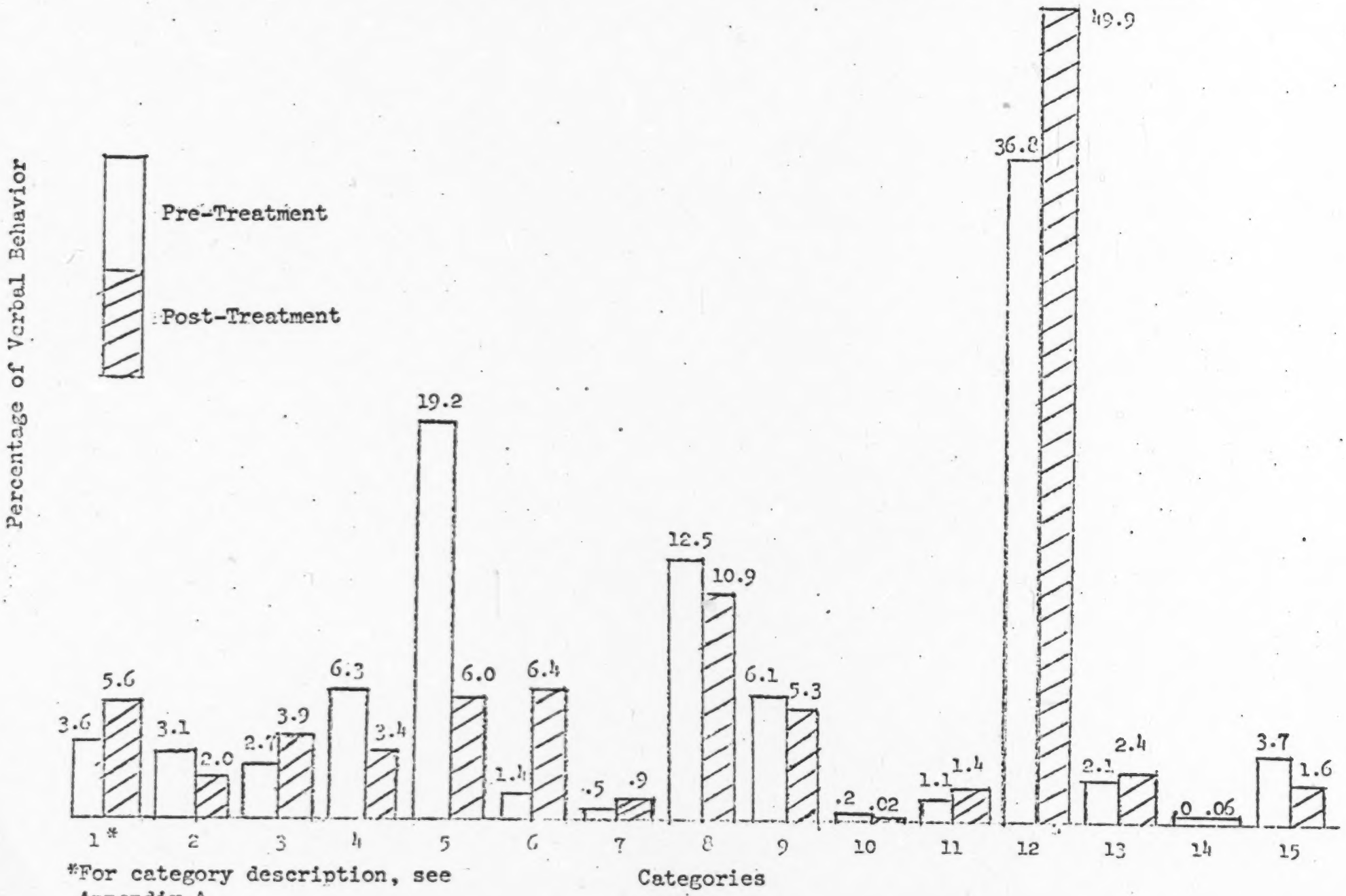
A COMPARISON OF THE PRE-TREATMENT AND POST-TREATMENT MEAN PERCENTAGE SCORES OF VERBAL BEHAVIOR FOR THE CONTROL GROUP IN FIFTEEN CATEGORIES OF THE BLUMBERG SYSTEM



*For category description, see Appendix A

FIGURE 2

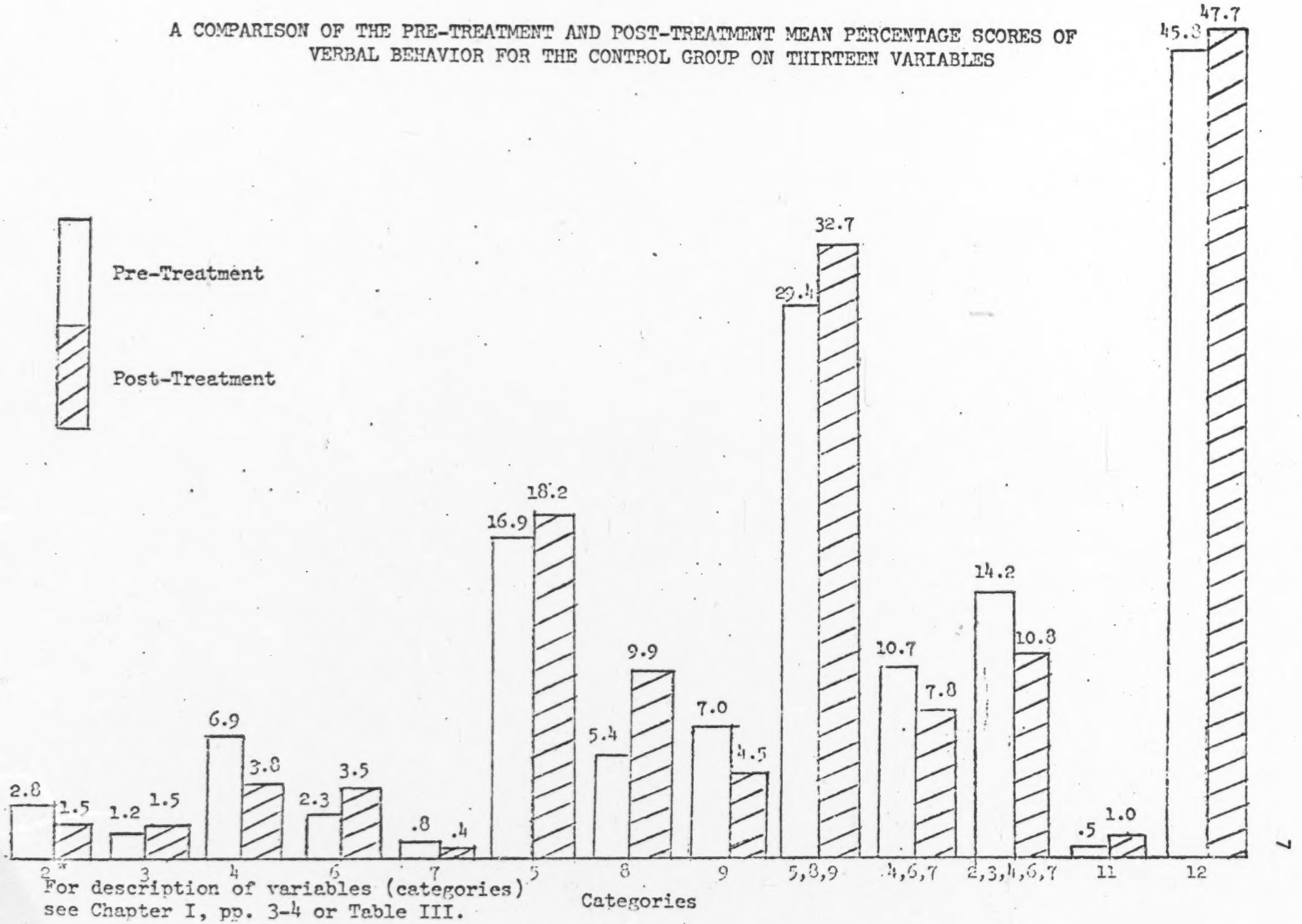
A COMPARISON OF THE PRE-TREATMENT AND POST-TREATMENT MEAN PERCENTAGE SCORES OF VERBAL BEHAVIOR FOR THE EXPERIMENTAL GROUP IN FIFTEEN CATEGORIES OF THE BLUMBERG SYSTEM



*For category description, see Appendix A

FIGURE 3

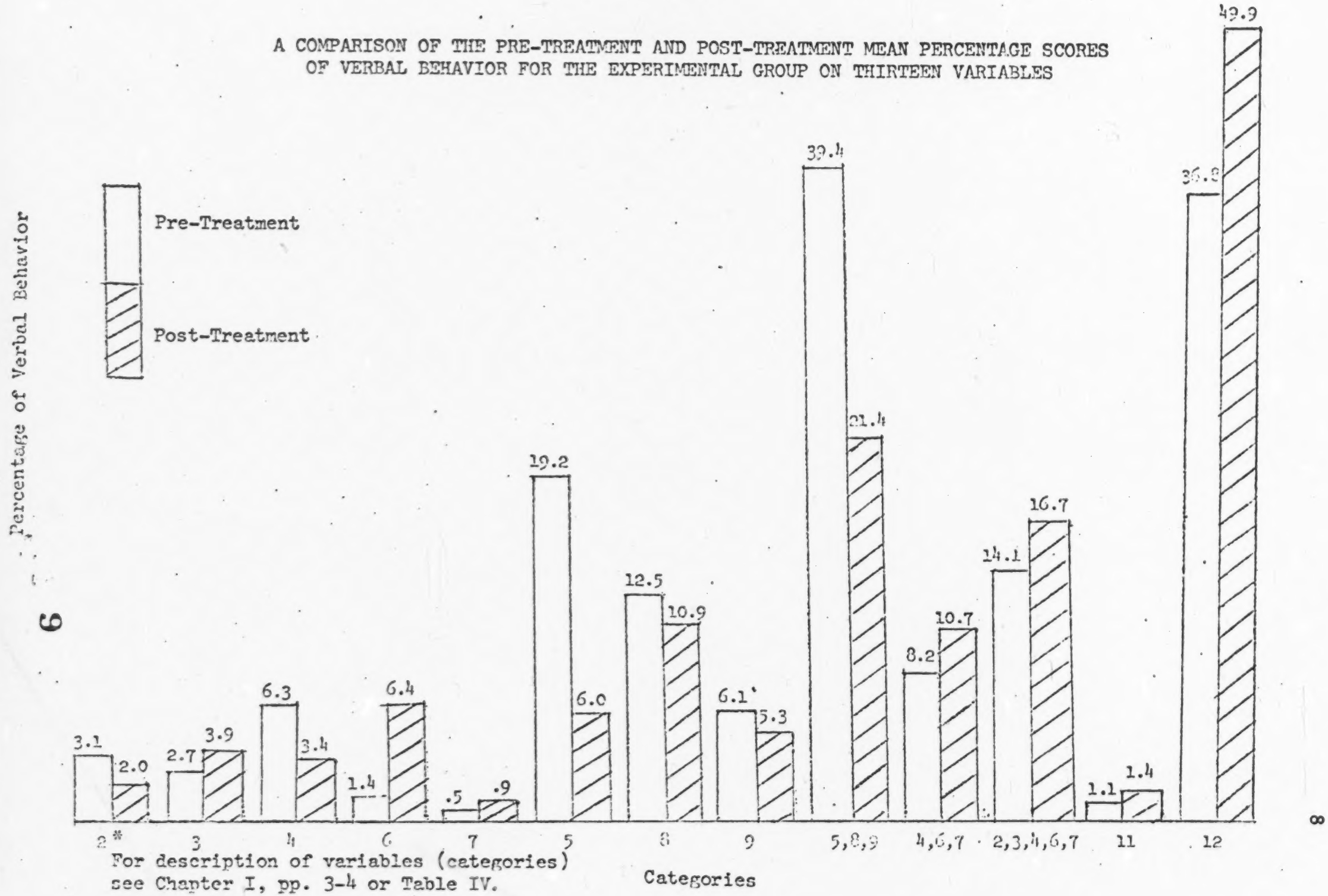
A COMPARISON OF THE PRE-TREATMENT AND POST-TREATMENT MEAN PERCENTAGE SCORES OF VERBAL BEHAVIOR FOR THE CONTROL GROUP ON THIRTEEN VARIABLES



For description of variables (categories) see Chapter I, pp. 3-4 or Table III.

FIGURE 4

A COMPARISON OF THE PRE-TREATMENT AND POST-TREATMENT MEAN PERCENTAGE SCORES OF VERBAL BEHAVIOR FOR THE EXPERIMENTAL GROUP ON THIRTEEN VARIABLES



For description of variables (categories) see Chapter I, pp. 3-4 or Table IV.

TABLE III

A COMPARISON OF THE PRE-TREATMENT AND POST-TREATMENT PERCENTAGES OF VERBAL BEHAVIOR FOR THE CONTROL GROUP ON THIRTEEN VARIABLES (N=7)

Variables Category	Mean Difference#	S. D.	t* Value	Level of Significance+
Praise 2	1.32	1.62	2.16	$p < .10$
Uses Teacher's Ideas 3	-0.31	1.74	-0.47	
Asks for Information 4	3.12	2.88	2.87	.05
Asks for Opinions 6	1.24	3.25	1.01	
Asks for Suggestions 7	.47	.57	2.21	$p < .10$
Gives Information 5	-1.28	8.93	-0.38	
Gives Opinions 8	-4.50	10.96	-1.09	
Gives Suggestions 9	2.53	2.62	2.55	.05
Direct Supervisory Influence Non-Problem Solving Sum of 5, 8, 9	-3.25	12.09	-0.71	
Indirect Supervisory Influence Sum of 2, 3, 4, 6, 7	3.37	3.61	2.47	.05
Problem-Solving Sum of 4, 6, 7	2.36	2.73	2.28	$p < .10$
Student Teacher Asks 11	-0.48	0.99	-1.29	
Student Teacher Gives 12	-1.90	9.60	- .52	

* t Value for two correlated samples: hypothesis that a mean difference = 0.

\+ 6 df on a two tailed test at .05 level of significance.

\# Negative numbers indicate an increase in the post-treatment data. Positive numbers indicate a decrease in the post-treatment data.

TABLE IV

A COMPARISON OF THE PRE-TREATMENT AND POST-TREATMENT PERCENTAGES OF VERBAL BEHAVIOR FOR THE EXPERIMENTAL GROUP ON THIRTEEN VARIABLES (N=7)

Variables Category	Mean Difference#	S. D.	t* Value	Level of Significance+
Praise 2	1.17	1.44	2.15	$p < .10$
Uses Teacher's Ideas 3	-1.27	1.85	-1.83	
Asks for Information 4	2.71	3.66	2.10	$p < .10$
Asks for Opinions 6	-5.05	3.05	-4.39	.05
Asks for Suggestions 7	-0.38	0.74	-1.36	
Gives Information 5	13.26	9.50	3.69	.05
Gives Opinions 8	1.68	11.85	0.38	
Gives Suggestions 9	0.89	7.43	0.32	
Direct Supervisory Influence Non-Problem Solving Sum of 5, 8, 9	18.06	17.25	2.77	.05
Indirect Supervisory Influence Sum of 2,3,4,6,7	-2.63	2.94	-2.37	$p < .10$
Problem Solving Sum of 4,6,7	-2.52	1.90	-3.52	.05
Student Teacher Asks 11	0.37	1.34	-0.73	
Student Teacher Gives 12	13.10	15.07	-2.30	$p < .10$

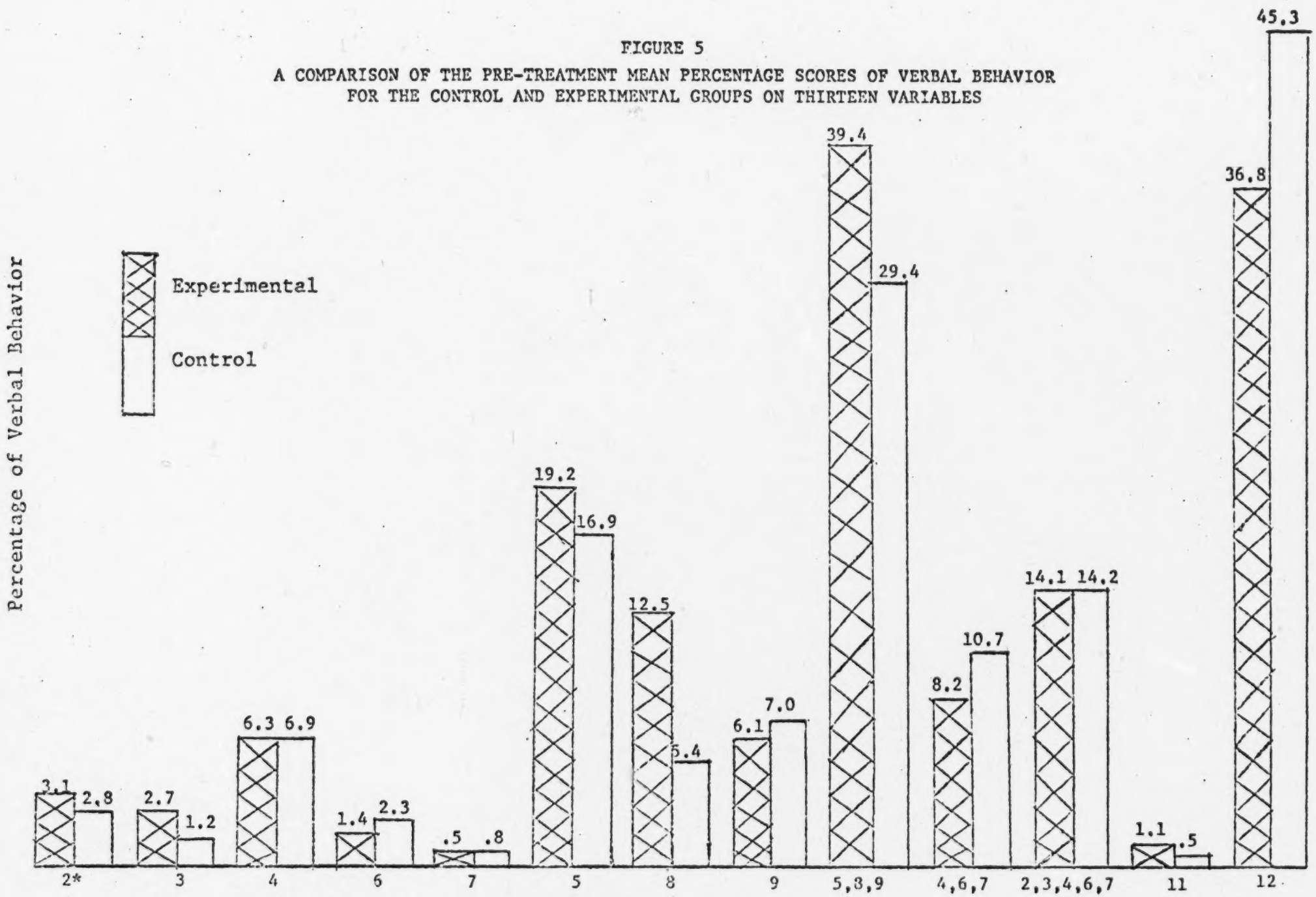
* t Value for two correlated samples: hypothesis that a mean difference = 0.

\+ 6 df on a two tailed test at .05 level of significance.

\# Negative numbers indicate an increase in the post-treatment data. Positive numbers indicate a decrease in the post-treatment data.

FIGURE 5

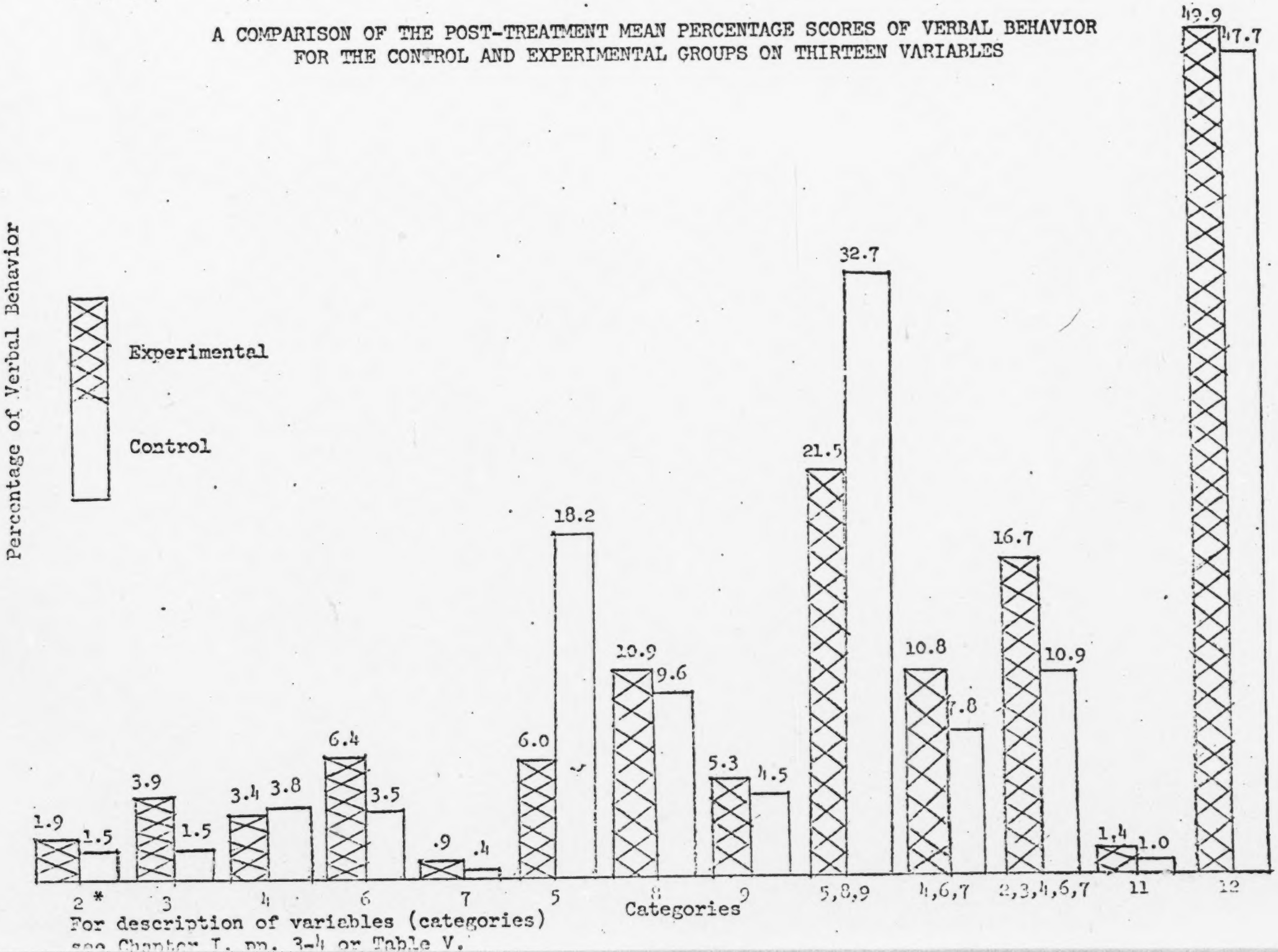
A COMPARISON OF THE PRE-TREATMENT MEAN PERCENTAGE SCORES OF VERBAL BEHAVIOR FOR THE CONTROL AND EXPERIMENTAL GROUPS ON THIRTEEN VARIABLES



*For description of variables (categories) see Chapter I, pp. 3-4

FIGURE 6

A COMPARISON OF THE POST-TREATMENT MEAN PERCENTAGE SCORES OF VERBAL BEHAVIOR FOR THE CONTROL AND EXPERIMENTAL GROUPS ON THIRTEEN VARIABLES



For description of variables (categories) see Chapter I, pp. 3-4 or Table V.

TABLE V

A COMPARISON OF THE POST-TREATMENT PERCENTAGES OF VERBAL BEHAVIOR FOR THE CONTROL AND EXPERIMENTAL GROUPS ON THIRTEEN VARIABLES

Variables Category	Control (N=7) $\bar{X}$	S. D.	Experimental (N=7) $\bar{X}$	S. D.	t*	Level of Significance+
Praise 2	1.54	1.12	1.98	1.58	0.61	
Uses Teacher's Ideas 3	1.54	1.15	3.95	2.00	-2.76	.05
Asks for Information 4	3.87	3.22	3.44	1.91	0.30	
Asks for Opinions 6	3.57	2.62	6.45	3.24	-1.83	$p < .10$
Asks for Suggestions 7	0.37	0.99	0.90	1.70	-0.96	
Gives Information 5	18.27	9.17	6.00	3.13	3.35	.05
Gives Opinions 8	9.95	11.64	10.91	5.79	-0.19	
Gives Suggestions 9	4.48	5.26	5.28	5.11	-0.29	
Direct Supervisory Influence Non-Problem Solving Sum of 5,8,9	32.71	15.96	21.53	12.15	1.48	
Indirect Supervisory Influence Sum of 2,3,4, 6,7	10.91	4.50	16.73	4.08	-2.54	.05
Problem Solving Sum of 4,6,7	7.81	3.59	10.80	4.51	-1.37	
Student Teacher Asks 11	1.02	0.93	1.47	1.65	-0.63	
Student Teacher Gives 12	47.70	14.16	49.92	14.79	-0.29	

* t Value for two independent samples: hypothesis that $u_1 = u_2$

+ 12 df on a two tailed test at .05 level of significance.

BIBLIOGRAPHY

Ager, Merlin. "Dogmatism and the Verbal Behavior of Student Teachers," Journal of Teacher Education, Vol. XXI, No. 2, Summer, 1970, pp. 179-183.

Amidon, Edmund J., and Flanders, Ned. The Role of the Teacher in the Classroom. A Manual for Understanding and Improving Teacher Classroom Behavior. Minneapolis, Minnesota: Association for Productive Thinking, 1967.

Amidon, Edmund J., and Flanders, Ned. "The Effects of Direct and Indirect Teacher Influence on Dependent Prone Student Learning Geometry," Journal of Educational Psychology, Vol. 52, 1961, pp. 286-291.

Amidon, Edmund J., and Hunter, E. Improving Teaching: The Analysis of Classroom Verbal Interaction. New York, N.Y.: Holt, Rinehart and Winston, Inc., 1966.

Amidon, Edmund J., and Hough, John B. Interaction Analysis: Theory, Research and Application. Reading, Mass.: Addison-Wesley Publishing Company, 1967.

Aschner, Mary Jane, and Gallagher, James J. "An Anthology of Observation Instruments, Volume A," Mirrors for Behavior II. Edited by A. Simon and E. Boyer. Philadelphia, Pa.: Research for Better Schools, Inc., 1970, pp. 3.1-3.6.

Association for Student Teaching. Internships in Teacher Education. Forty-seventh Yearbook edited by Horton C. Southworth. Washington, D.C.: Association for Student Teaching, Department of the National Education Association, 1968.

Association for Student Teaching. Professional Growth Inservice of the Supervising Teacher. Forty-fifth Yearbook edited by Robert B. Hayes. Dubuque, Iowa: William C. Brown Company, Inc., 1966.

Association for Student Teaching. Theoretical Bases for Professional Laboratory Experiences in Teacher Education. Forty-fourth Yearbook edited by Cecilia J. Lauby. Dubuque, Iowa: William C. Brown Company, Inc., 1965.

Association for Student Teaching. The College Supervisor: Conflict and Challenge. Forty-third Yearbook edited by Robert T. Pfeiffer. Dubuque, Iowa: William C. Brown Company, Inc., 1965.

Ayer, F. C. Fundamentals of Instructional Supervision. New York, N.Y.: Harper Brothers, Inc., 1954.

Bales, Robert. "How People Interact in Conferences," Mirrors for Behavior. Edited by A. Simon and E. Boyer. Philadelphia, Pa.: Research for Better Schools, Inc., 1970. Vol. XII, pp. 32.4-1 to 32.4-20.

Bales, Robert F. Interaction Process Analysis. Cambridge, Mass.: Addison Wesley Press, 1951.

Barbour, Chandler. "A Study of the Change in Objectivity of Supervising Teachers' Perceptions About Supervising Behavior Through the Use of an Observation Schedule and Conference Guide." Unpublished Ed.D. dissertation, Wayne State University, Detroit, Michigan, 1968.

Barbour, Chandler. "Levels of Thinking in Supervisory Conferences." Unpublished paper presented at the American Research Convention, 1970.

Bauserman, J. E. "Post Observation Interview," Virginia Journal of Education, Vol. XXXVIII, No. 3, January, 1945, p. 190.

Bebb, Aldon M., Low, Arlene F., and Waterman, Floyd T. Supervisory Conference as Individualized Teaching. Washington, D.C.: Association for Student Teaching, Bulletin No. 28, 1969.

Bellack, Arno, et al. The Language of the Classroom. New York, N.Y.: Teachers College Press, Columbia University, 1966.

Bennie, William A. Cooperation for Better Student Teaching. Minnesota: Burgess Publishing Company, 1966.

Berman, L. M., and Usery, M. L. Personalized Supervision. Washington, D.C.: Association for Supervision and Curriculum Development, 1966.

Bloom, B. S., et al. Taxonomy of Educational Objectives: Cognitive Domain. New York: Longman, Green and Company, 1956.

Blumberg, Arthur. "A System for Analyzing Supervisor-Teacher Interaction," Mirrors for Behavior. Edited by A. Simon and E. Boyer. Philadelphia, Pa.: Research for Better Schools, Inc., 1970, Vol. VIII, pp. 34.1-1 to 34.1-15.

Blumberg, Arthur, and Amidon, Edmund. "Teacher Perceptions of Supervisor-Teacher Interaction," Administrator's Notebook, Vol. XIV, No. 1, September 1965.

Blumberg, Arthur, and Cusick, Philip. "Supervisor-Teacher Interaction: An Analysis of Verbal Behavior." Unpublished paper presented at the American Educational Research Association Convention, 1970.

Brown, A. B., Cobban, M. R., and Waterman, F. "The Analysi of Verbal Teaching Behavior: An Approach to Supervisory Conferences with Student Teachers." Unpublished Ed.D. dissertation, Teachers College, Columbia University, 1965.

Brown, R. V., and Hoffman, M. J. S. "A Promissory Model for Analyzing and Describing Verbal Interaction Between College Supervisors and Student Teachers During Supervisory Conferences." Unpublished Ed.D. dissertation, Columbia University, 1966.

Bruner, Jerome S. Toward a Theory of Instruction. Cambridge, Mass.: Belknap Press of Harvard University, 1966.

Cogan, M. L. "Clinical Supervision by Groups," The College Supervisor: Conflict and Challenge. Cedar Falls, Iowa: Association for Student Teaching, Forty-third Yearbook, 1964, pp. 114-141.

Dussault, Giles. A Theory of Supervision in Teacher Education. New York: Teachers College Press, Columbia University, 1970.

Edmund, N. R., and Hemink, L. "Ways in Which Supervisors Help Student Teachers," Educational Research Bulletin, Vol. XXXVII, No. 3, March, 1958, pp. 57-60.

Gage, N. L. "Paradigms for Research on Teaching," Handbook of Research on Teaching. Edited by N. L. Gage. Chicago, Ill.: Rand McNally Company, 1963, pp. 94-141.

Goldhammer, Robert. Clinical Supervision: Special Methods for the Supervision of Teachers. New York, N.Y.: Holt, Rinehart and Winston, Inc., 1969.

Gourevitch, Vivian. Statistical Methods: A Problem Solving Approach. Boston, Mass.: Allen and Bacon, Inc., 1970.

Greenberg, S. B. "A Comparative Analysis of Selected Studies of Classroom Teaching." Unpublished Ed.D. report, Columbia University, 1966.

Gwynn, J. M. Theory and Practice of Supervision. New York: Dodd, Mead and Company, 1961.

Harris, B. M. "Strategies for Instructional Change: Promising Ideas and Perplexing Problems," The Supervisor: Agent for Change in Teaching. Washington, D.C.: Association for Supervision and Curriculum Development, 1965, pp. 85-95.

Harris, B. M. "Need for Research on Instructional Supervision," Educational Leadership, Vol. XXI, No. 135, November 1963, p. 129.

Heidelbach, Ruth. "The Development of a Tentative Model for Analyzing and Describing the Verbal Behavior of Cooperating Teachers Engaged in Individualized Teaching with Student Teachers." Unpublished Ed.D. dissertation, Columbia University, 1967.

Hill, Emma Jean McClure. "A Study of the Verbal Interaction Between Master Teacher and Students During Clinical Nursing Conferences," Classroom Interaction Newsletter, Vol. III, No. 3, May 1968, pp. 21-22.

Hollister, G. E. "The Group Conference of the Supervising Teacher," Journal of Educational Research, Vol. XLIV, No. 9, September, 1950.

Kimsey, Theodora R. "The Work of One College Supervisor with Cooperating Teachers in Off-Campus Schools: An Analysis of Conferences." Unpublished Ed.D. dissertation, Teachers College, Columbia University, 1969.

Krathwohl, D. R., et al. Taxonomy of Educational Objectives: Affective Domain. New York: David McKay Company, Inc., 1956.

Kyte, G. C. "The Effective Supervisory Conference," California Journal of Educational Research, Vol. XIII, No. 4, September, 1962, pp. 160-168.

Lindsey, Margaret. "Speculations on the Future of Teacher Education and Cooperative Endeavors," Partnership in Teacher Education. Edited by E. Brooks Smith, Hans C. Olsen, Patrick J. Johnson, and Chandler Barbour. Washington, D.C.: American Association of Colleges for Teacher Education, 1966, pp. 277-295.

Lindsey, Margaret, et al. Inquiry Into Teaching Behavior of Supervisors in Teacher Education Laboratories. New York, N.Y.: Teachers College Press, Columbia University, 1969.

Lucio, W. H., and McNeil, J. D. Supervision: A Synthesis of Thought and Action. New York, N.Y.: McGraw-Hill Book Company, 1959.

McConnell, G. "They Helped Us, But-!" Journal of Teacher Education, Vol. XI, No. 1, March, 1960, pp. 84-86.

McGeoch, Dorothy, and Heidelbach, Ruth. "Analytical Conferences for Supervisors," Partnership in Teacher Education. Edited by E. Brooks Smith, Hans C. Olsen, Patrick J. Johnson, and Chandler Barbour. Washington, D.C.: American Association of Colleges for Teacher Education, 1966, pp. 246-247.

McGeoch, Dorothy, and Lindsey, Margaret. "Supervisory Conferences and the Analysis of Teaching," The Study of Teaching. Edited by Dean Corrigan. Washington, D.C.: Association for Student Teaching, 1967, pp. 63-69.

Medley, D. M., and Mitzel, H. E. "Measuring Classroom Behavior by Systematic Observation," Handbook of Research on Teaching. Edited by N. L. Gage. Chicago, Ill.: Rand McNally Company, 1963.

Michalak, Daniel. "Testing Interdisciplinary Models of Dialogue Settings for Improving the Effectiveness of Supervisor's Verbal Behaviors in a Supervisory Conference." Unpublished paper presented at the 1971 American Educational Research Association Convention.

Michalak, Daniel A. "An Exploratory Study of Supervisor Verbal Behaviors in a Student Teaching Conference." Unpublished Ed.D. dissertation, Wayne State University, Detroit, Michigan, 1968.

Morrison, V. B., and Dixon, W. R. "New Techniques of Observation and Assessment of Student Teaching," The College Supervisor: Conflict and Challenge. Forty-third Yearbook of the Association for Student Teaching. Cedar Falls, Iowa: The Association, 1964.

Olsen, Hans C., Barbour, Chandler, and Michalak, Daniel C. The Teaching Clinic: A Team Approach to Improved Teaching. Washington, D.C.: Association of Teacher Educators, National Education Association, 1971.

Reed, Helen M. "The College Supervisor in a Multi-Purpose University in a Rural Setting," The College Supervisor: Conflict and Challenge. Forty-third Yearbook of the Association for Student Teaching. Dubuque, Iowa: William C. Brown, Inc., 1964, pp. 23-30.

Roth, L. H. "Selecting Supervising Teachers," Journal of Teacher Education, Vol. XII, No. 4, December, 1961, pp. 476-481.

Rousseau, Joseph Frederick. "A Study of Verbal Behavior Engaged in by College Student Teaching Supervisors in the Dyadic Conference with Cooperating Teachers and Student Teachers." Unpublished Ph.D. dissertation, Graduate School of Education at Harvard University, 1969.

Schueler, H., and Gold M. "Video Recordings of Student Teachers: A Report of the Hunter College Research Project," Journal of Teacher Education, Vol. XV, No. 4, December, 1964, pp. 358-364.

Shaplin, J. T. "Practice in Teaching," Harvard Educational Review, Vol. XXXI, No. 1, Winter 1961, pp. 23-49.

Simon, Anita. "Doctoral Dissertation Issue," Classroom Interaction Newsletter, Vol. III, No. 3, May, 1968, pp. 1-32.

Simon, Anita, and Boyer, E. Gil. "An Anthology of Observation Instruments," Mirrors for Behavior. Philadelphia, Pa.: Research for Better Schools, Inc., 1970, Vols. I-XIV.

Smith, Othanel, Cohen, Saul B., and Pearl, Arthur. Teachers for the Real World. Washington, D.C.: American Association of Colleges for Teacher Education, 1969.

Smith, B. O., Meux, Milton O., Combs, J., and Huthall, G. A Tentative Report on the Strategies of Teaching. U.S. Office of Education Cooperative Research Project No. 1640. Urbana, Ill.: University of Illinois, 1964.

Smith, B. O., and Meux, Milton O. A Study of the Logic of Teaching: A Report on the First Phase of a Five Year Research Project. Washington, D.C.: United States Office of Education, 1959.

Smith, B. O., and Meux, M. A Study of the Logic of Teaching. Urbana, Ill.: University of Illinois, U.S. Office of Education Cooperative Research Project No. 258 (7257), 1959.

Smith, Brooks E. "The Case for the College Supervisor," The College Supervisor: Conflict and Challenge. Forty-third Yearbook of the Association for Student Teaching. Dubuque, Iowa: William C. Brown Company, Inc., 1964, pp. 166-173.

Stratemeyer, Florence B., and Lindsey, Margaret. Working with Student Teachers. New York, N.Y.: Bureau of Publications, Teachers College, Columbia University, 1969.

Swineford, E. J. "Analysis of Teaching-Improvement Suggestions to Student Teachers," Journal of Experimental Education, Vol. XXXII, No. 3, Spring, 1964, pp. 299-303.

Taba, Hilda, Levine, S., Elzey, F. Thinking in Elementary School Children. U.S. Office of Education Cooperative Research Project No. 1574. San Francisco, California: San Francisco State College, 1964.

Travers, R. M. W. An Introduction to Educational Research. New York, N.Y.: Macmillan Company, 1958.

Trimmer, R. L. "Tell Us More, Student Teacher!" Journal of Teacher Education, Vol. XII, No. 2, June, 1961, pp. 229-231.

Trimmer, R. L. "Student Teachers Talk Back," Journal of Teacher Education, Vol. XI, No. 4, December, 1960, pp. 537-538.

Van Dalen, Deobold B. Understanding Educational Research. New York, N.Y.: McGraw-Hill Book Company, 1966.

Verduin, John R. Conceptual Models in Teacher Education. Washington, D.C.: American Association of Colleges for Teacher Education, 1967.

Weller, Richard M. "An Observational System for Analyzing Clinical Supervision of Teachers." Unpublished Ed.D. dissertation, Graduate School of Education of Harvard University, 1969.

White, Mary Lou, Radtke, Muriel, and Berman, Louise. "Supervision: Focuson Thinking," Supervision: Emerging Profession. Edited by Robert R. Leeper. Washington, D.C.: Association for Supervision and Curriculum Development, 1969, pp. 113-122.

Young, David B. "Using a Systems Approach to Develop and Research Supervisory Conference Strategies." Unpublished paper presented at the 1971 American Educational Research Association Convention.